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*Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.*

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# United States Patent [19]

Abe et al.

[11] Patent Number: 6,099,402

[45] Date of Patent: Aug. 8, 2000

## [54] SMALL APPARATUS FOR DISPENSING CIRCULAR PLATE OBJECTS

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[73] Assignee: Asahi Seiko Co. Ltd., Tokyo, Japan

[21] Appl. No.: 09/151,531

[22] Filed: Sep. 11, 1998

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Sep. 18, 1997 [JP] Japan ..... 9-291470  
Dec. 19, 1997 [JP] Japan ..... 9-370005

[51] Int. Cl.<sup>7</sup> ..... G07D 1/00

[52] U.S. Cl. .... 453/57; 221/241

[58] Field of Search ..... 453/13, 33, 49, 453/57; 221/241; 222/305

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Attorney, Agent, or Firm—Quirk & Tratos

## [57] ABSTRACT

An apparatus for dispensing disc bodies such as coins or tokens is set forth which includes a fixed substrate and a dispensing disc spaced from said substrate a distance related to the thickness of said disc bodies. The dispensing disc includes a plurality of openings having a diameter adapted to receive a disc body for dispensing thereof. The dispensing disc is attached to a shaft which is axially moveable to adjust the space between the dispensing disc and substrate. The shaft is connected to a motor through an axially aligned planetary gear apparatus. Rotation of the dispensing disc receives coins or tokens in the openings and space whereupon the coins are moved for dispensing. An elevation body engages the dispensing disc and includes a plurality of annular teeth. An adjustment body has teeth to engage the elevation body teeth. Rotation of the adjustment body axially adjusts the elevation body and dispensing disc to adjust the space to accept different thicknesses of coins.

7 Claims, 6 Drawing Sheets

